Main Loop

START

Initialize handlers and simulation state

time < duration

No → STOP

Yes

Update lambda

Select next event
Update time

Execute next event

Event returned User

Yes → Redirect to another station

No

Check for power-down/up

Station Events

START

Event type

AddUser

Generate new user
and timestamp for
next one

State = Active

No

Yes

Return user

Heap full?

Yes

No

Add user to heap

Return None
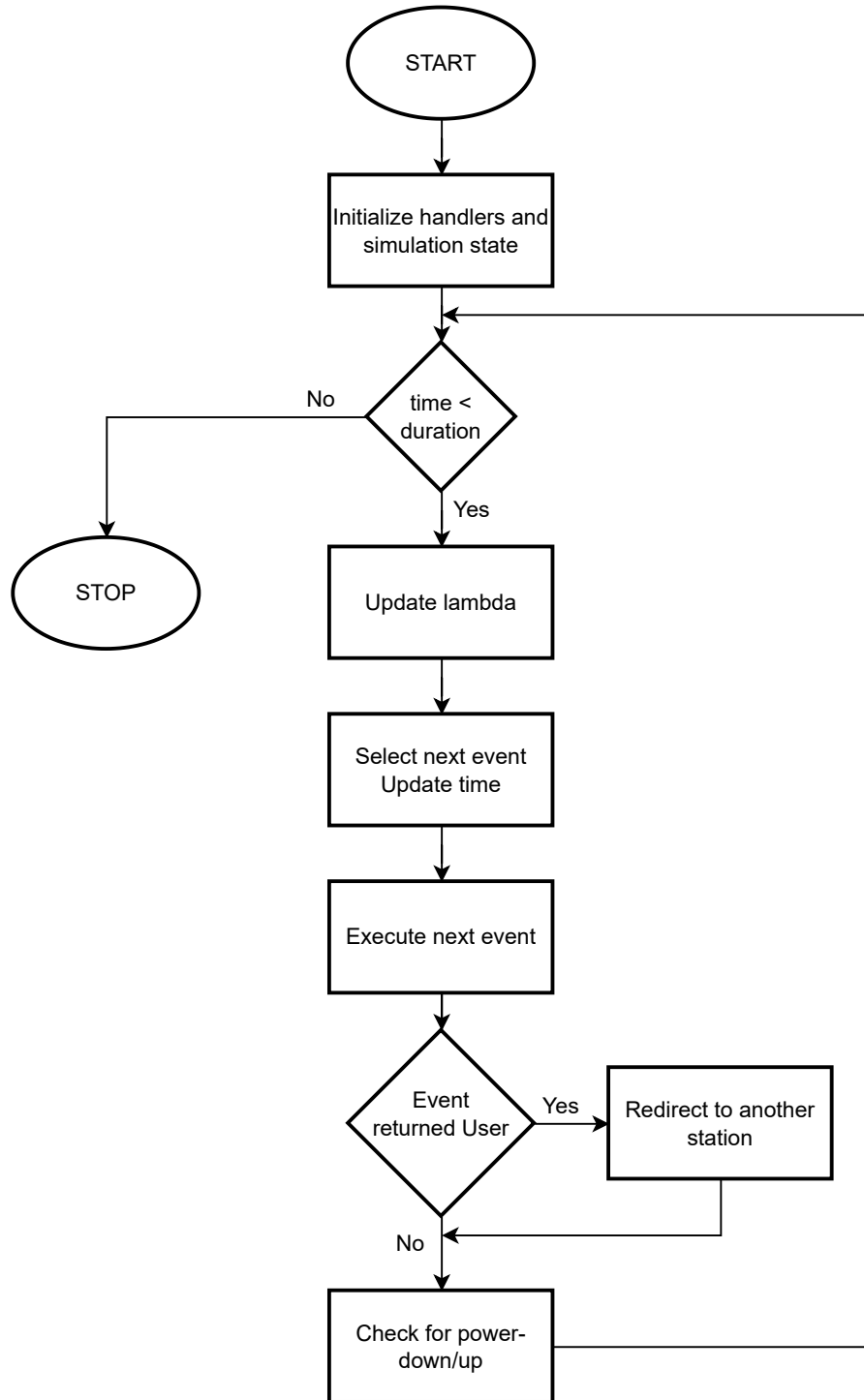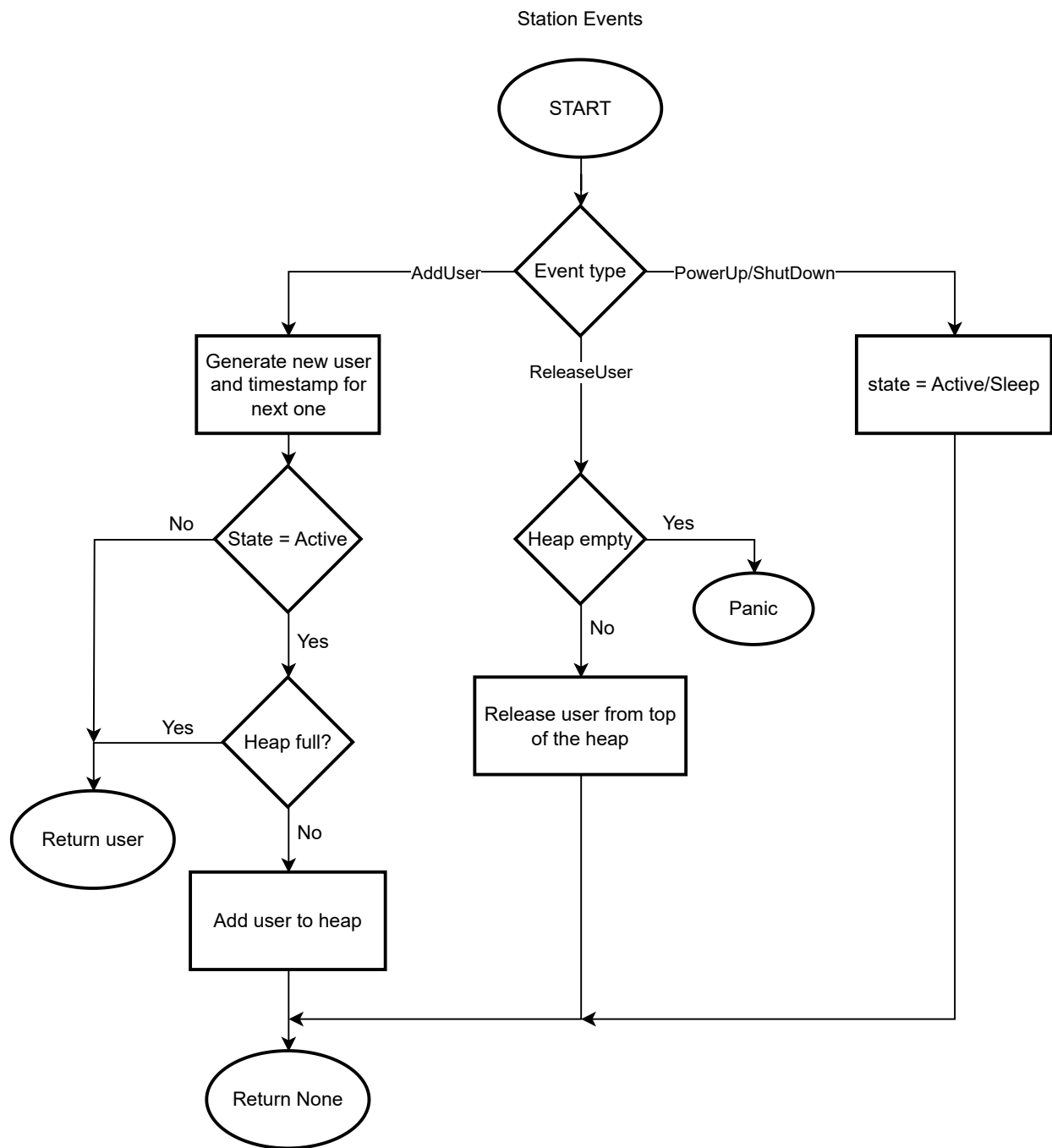
ReleaseUser

Heap empty

Yes

Panic

No

Release user from top
of the heap

PowerUp/ShutDown

state = Active/Sleep

Station Power-up/down

START

Any station with load > 80%

No → Any station with load < 20%

No →

Yes → Is there enough space in active stations for users?

No →

Yes → Change state to PowerDown of single station. Redirect its users to other active stations

Yes → Any station in sleep state?

Yes → Wakeup single station → Redirect half of load to wakeup station

No →

STOP